

Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

1. (currently amended) A peptide ~~separated from tunicate and~~ comprising an amino acid sequence represented by Chemical Formula 1 below; ~~by the below <Chemical Formula 1> in which each amino acid is represented by each figure;~~
<Chemical Formula 1>

W₁X₂B'₃U₄X₅X₆B₇B₈U₉X₁₀B'₁₁C₁₂U₁₃B₁₄U₁₅X₁₆X₁₇U₁₈ (SEQ ID NO: 11)

wherein,

W represents tryptophane ~~or its derivatives~~;

X, each variable of which X₂, X₅, X₆, X₁₀, X₁₆ and X₁₇ is individually represents ~~more than one~~ an amino acid residue selected from the group consisting of tyrosine, valine, isoleucine, leucine, methionine, phenylalanine and tryptophane;

B represents ~~more than one~~ an amino acid residue selected from the group consisting of arginine, lysine and histidine;

B' represents ~~more than one~~ an amino acid residue selected from the group consisting of arginine, lysine and histidine or from a group consisting of asparagine and glutamine; ~~and~~

U represents ~~more than one~~ an amino acid residue selected from the group consisting of ~~glycine~~ glycine, serine, alanine and threonine.

2. (original) The peptide as set forth in claim 1, wherein the tunicate is *Halocynthia aurantium*.

3. (cancelled)

4. (currently amended) The peptide as set forth in claim 1, wherein the peptide ~~consists of~~ comprises amino acid sequence SEQ ID NO:1 ~~represented by SEQ:~~

ID. No. 1 in which ~~W₁ is tryptophane, X₂ is leucine, B'₃ is asparagine, U₄ is alanine, X₅ is leucine, X₆ is leucine, B₇ is histidine, B₈ is histidine, U₉ is glycine, X₁₀ is leucine, B'₁₁ is asparagine, C₁₂ is cysteine, U₁₃ is alanine, B₁₄ is lysine, U₁₅ is glycine, X₁₆ is valine, X₁₇ is leucine and U₁₈ is alanine.~~

5. (withdrawn-currently amended) A peptide comprising an amino acid sequence represented by Chemical Formula 2 below: ~~by the below~~ ~~<Chemical Formula 2>~~ in which ~~three amino acids (W₁X₂B'₃) of the peptide represented by the above~~ ~~<Chemical Formula 1>~~ are lost;

~~<Chemical Formula 2>~~

U₄X₅X₆B₇B₈U₉X₁₀B'₁₁C₁₂U₁₃B₁₄U₁₅X₁₆X₁₇U₁₈ (SEQ ID NO:13)

wherein In the above Formula,

U represents ~~more than one~~ an amino acid residue selected from a group consisting of ~~glycine~~ glycine, serine, alanine and threonine;

X, each variable of which X₅, X₆, X₁₀, X₁₆ and X₁₇ is individually selected from ~~more than one~~ an amino acid residue selected from a group consisting of tyrosine, valine, isoleucine, leucine, methionine, phenylalanine and tryptophane;

B represents ~~more than one~~ an amino acid residue selected from a group consisting of arginine, lysine and histidine; and

B' represents ~~more than one~~ an amino acid residue selected from a group consisting of arginine, lysine and histidine or from a group consisting of asparagine and glutamine.

6. (cancelled).

7. (withdrawn-currently amended) The peptide as set forth in claim 5, wherein the peptide ~~is consisted of~~ comprises amino acid sequence represented by ~~SEQ. ID. No. 2~~ SEQ ID NO:15 in which U₄ is alanine, X₅ is leucine, X₆ is leucine, B₇ is histidine, B₈ is

histidine, U₉ is glycine, X₁₀ is leucine, B'₁₁ is asparagines, C₁₂ is cysteine, U₁₃ is alanine, B₁₄ is lysine, U₁₅ is glycine, X₁₆ is valine, X₁₇ is leucine and U₁₈ is alanine.

8. (withdrawn-currently amended) A peptide dimer comprising an amino acid sequence represented by Chemical Formula 3 below: ~~the below <Chemical Formula 3>~~ wherein ~~the peptide represented by <Chemical Formula 1> of claim 1 is combined with the other peptide represented by <Chemical Formula 2> of claim 5 at cysteine site by disulfide bond~~ wherein each peptide of the dimer is represented by <Chemical Formula 1> (SEQ ID NO:11), and the peptides are joined at a cysteine site by disulfide bond;

<Chemical Formula 3>

W₁X₂B'₃U₄X₅X₆B₇B₈U₉X₁₀B'₁₁C₁₂U₁₃B₁₄U₁₅X₁₆X₁₇U₁₈

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W₁X₂B'₃U₄X₅X₆B₇B₈U₉X₁₀B'₁₁C₁₂U₁₃B₁₄U₁₅X₁₆X₁₇U₁₈.

9. (withdrawn-currently amended) A peptide dimer comprising an amino acid sequence represented by Chemical Formula 4 below: ~~the below <Chemical Formula 4>~~ wherein ~~the two peptides represented by <Chemical Formula 1> of claim 1 are combined with each other at cysteine site by disulfide bond~~ wherein each peptide of the dimer is represented by <Chemical Formula 2> (SEQ ID NO:13), and the peptides are joined at a cysteine site by disulfide bond;

<Chemical Formula 4>

U₄X₅X₆B₇B₈U₉X₁₀B'₁₁C₁₂U₁₃B₁₄U₁₅X₁₆X₁₇U₁₈

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U₄X₅X₆B₇B₈U₉X₁₀B'₁₁C₁₂U₁₃B₁₄U₁₅X₁₆X₁₇U₁₈.

10. (withdrawn-currently amended) A peptide dimer comprising an amino acid sequence represented by Chemical Formula 5 below: ~~the below <Chemical Formula 5>~~

~~wherein the two peptides represented by <Chemical Formula 2> of claim 5 are combined with each other at cysteine site by disulfide bond~~ wherein one peptide of the dimer is represented by <Chemical Formula 1> (SEQ ID NO:11) and another peptide of the dimer is represented by <Chemical Formula 2> (SEQ ID NO: 13), and the peptides are joined at a cysteine site by disulfide bond;

<Chemical Formula 5>

W₁X₂B'₃U₄X₅X₆B₇B₈U₉X₁₀B'₁₁C₁₂U₁₃B₁₄U₁₅X₁₆X₁₇U₁₈

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U₄X₅X₆B₇B₈U₉X₁₀B'₁₁C₁₂U₁₃B₁₄U₁₅X₁₆X₁₇U₁₈.

11. (currently amended) An antimicrobial agent comprising ~~one or more a peptide~~ peptides selected from a group consisting of compounds represented by <Chemical Formula 1—5> comprising the Chemical Formula 1 of claim 1 as an active ingredient.

12. (new) An antimicrobial agent comprising a peptide comprising the Chemical Formula 2 of claim 5 as an active ingredient.

13. (new) An antimicrobial agent comprising a peptide dimer comprising the Chemical Formula 3 of claim 8 as an active ingredient.

14. (new) An antimicrobial agent comprising a peptide dimer comprising the Chemical Formula 4 of claim 9 as an active ingredient.

15. (new) An antimicrobial agent comprising a peptide dimer comprising the Chemical Formula 5 of claim 10 as an active ingredient.